

FLORIDA'S EXCLUSIVE CITRUS MAGAZINE

Vol. 24 — No. 1

JANUARY, 1945

Published by the Florida Citrus Commission

FREE PUBLIC LIBRARY JACKSONVILLE, FLORIDA

Citrus On The Upgrade

Early forecasts that the present shipping season would prove to be one of the best the citrus growers of Florida have ever experienced, seem in a fair way to be realized.

Not only have the growers produced a heavy crop in spite of early season droppage due to extended drouth, but the quality is about all that could be desired. Shipments have been unusually heavy and the prices have ruled much higher than those received during recent years. According to Marvin H. Walker, Secretary-Manager of the Florida Citrus Commission the outlook is that the present season will be the best ever experienced by the industry. He predicts that the season's return to growers will be well above \$100,000,000, far in excess of last year's favorable returns and double the amount received by growers for their crop of 1935.

In spite of numerous problems facing the industry due to war conditions, growers have met and solved most of the vexing problems. Labor and transportation difficulties have been surmounted and growers have been able to meet a greatly increased demand on the part of the consuming public without anticipated delay in delivery.

And, while the shipment of fresh fruit has increased beyond early expectation, canning plants and concentrate plants are working overtime and taking vast quantities of fruit. The demand for canned fruits and juices by the civilian and armed population is showing a steady growth, while more than 11 percent of the present crop is being turned into citrus concentrates by the large plants at Dunedin and Lake Wales. The output of these plants is being taken largely by the government under the lend-lease program for shipment to our allies over-seas.

Growers, many of whom have been operating at a loss for some years, are deserving of any profit which may accrue to them from the present favorable conditions. As Florida's major industry, outside the tourist trade, the present situation is one which will redound to the profit of all Florida, and is particularly welcome at this time when the state is robbed of much of its tourist trade by war-time conditions, gasoline rationing and restrictions on travel.

The citrus industry has long been the backbone of Florida agriculture and now, along with the state's ship-building and other war industries, together with the vast number of armed forces stationed in the state, it assumes new and greater importance. Should conditions up to date continue through the season, Mr. Walker's prediction that the season will prove to be one of the best in the industry has ever enjoyed may well prove true.

Citrus Advertising Under Way

Early in December the citrus advertising campaign sponsored by the Florida Citrus Commission got under way, and while it is yet too early to definitely appraise results, it is evident that even this early the campaign is beginning to have its effect in stimulating buying in the major consuming centers. That the campaign is being well handled by the Commission is apparent.

The program calls for the expenditure of some \$675,000 for advertising and sales promotion for fresh grapefruit, oranges and tangerines. In addition, a further amount is to be spent in advertising canned citrus products later in the season.

By far the greater portion of the sum allotted for advertising fresh fruits is to be spent in the newspapers of those Northern sections which are the greatest consumers of Florida citrus fruits. Particular stress will be placed upon advertising in those areas where there are great numbers of war workers, who with their present earning power are probably our greatest potential customers.

With government agencies stressing the food and health value of citrus fruits, this advertising where great numbers of war workers are employed should serve to bring about increased consumption of such fruits among a class which heretofore the consumption has been limited. This is a part which is well worthwhile for once this class of workers become accustomed to the daily use of Florida citrus fruits during wartime, it may be confidently expected that the appetite thus acquired will remain during peacetime — to the profit of Florida citrus growers.

This advertising campaign is the work of a qualified experts should be and we believe will be worth many times the few cents per box which are paid for its proper promotion.

"FOOD WILL WIN THE WAR AND WRITE THE PEACE"

CLAUDE R. WICKARD, Secretary of Agriculture



the aid of **IDEAL Fertilizers** and **IDEAL Field Service** for **Victory Production!**

Truly these are times to test the quality of men and materials. Foodstuffs, especially Florida's vitamin-rich citrus fruits and vegetables are vitally needed. Yet critical shortages of supplies and labor face the grower.

Nevertheless, our nation and its fighting men rest secure in the knowledge that you are fighting with them . . . that you are earnestly applying your long experience and great knowledge of crop production to achieve the utmost yield.

Yet experience and knowledge alone, important as they are, can't solve wholly the problem. You also need the finest of fertilizers—**IDEAL Brands** that have been tested through war and peace for nearly half a century.

Now, when quantity production of highest quality crops means not only profit but victory, you can confidentially turn to **IDEAL Brands**, enlisting them as reliable partners for Victory production.

In addition to these fine **IDEAL Fertilizers** we also place at your service our staff of trained and capable field men. They stand ready to work with you to achieve the highest possible productivity and the greatest possible economies through scientifically sound fertilizing, spraying and cultivating programs.

Couple your **IDEAL** fertilizer program with highly efficient **IDEAL** and **FASCO** insecticides and sprays.



**WILSON & TOOMER
FERTILIZER COMPANY
JACKSONVILLE - FLORIDA**

**INVEST IN VICTORY
BUY WAR BONDS!**

Prevention Of Stem End Rot

By CHARLES BROOKS, Principal Pathologist,
Division Crops and Diseases, Bureau of Plant Industry, U. S. D. A.
At Meeting Florida State Horticultural Society

Stem end rot of oranges and other citrus increases with temperature and length of haul, and with any delay in getting the fruit to the consumer. It is not a usual cause of trouble in the Florida and other nearby markets where fruit passes quickly into consumption, and it does not often cause losses in the large receiving centers; but where

in long distance shipments and in final distribution. It seems possible that under war conditions some consideration will have to be given to the fact that this much desired speed probably cannot always be maintained. There undoubtedly will be delays in reaching the larger centers and further delays and less frequent service to

land town about 60 miles from Boston. The local representative of one of the largest grocery chains was throwing out rotten oranges by the handful with every sale he made. He remarked, "The rot always starts at the stem on Florida oranges, and with delayed shipments I sometimes throw out 40 or more oranges to the box upon arrival. Some of my customers won't buy Florida oranges because of the rot." I, myself, found by frequent purchases that I could not keep the oranges for a three-day period without holding them in a refrigerator.

The home is where the greatest losses occur. Oranges are often left at living room temperatures along with other fruits. With large numbers of families on farms and in small towns, marketing is largely a weekly rather than a daily event, often greatly dependent upon the weekly pay-off. If only one orange out of a dozen decays before the end of the week, it is an 8½% loss, and this loss is based on the final retail price rather than on the price to the grower. The loss may often be greater than this. With Florida oranges purchased by the box for experimental purposes on the Washington, D. C., market the past several years, I have had an average of 28% of stem end rot after holding the entire lot at living room temperature for a period of one week, and in one instance I had

(Continued on page 6)

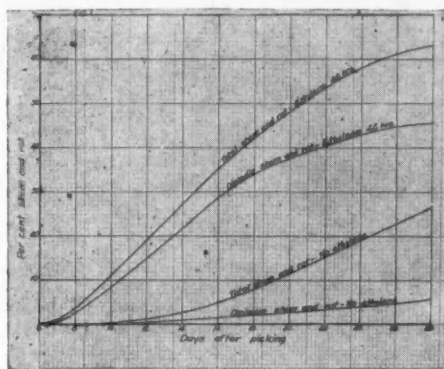


Fig. 1. Stem end rot of oranges as affected by ethylene treatment. The curves give the average of six separate experiments carried out in the fall and early winter of 1941-42, five with Parson Brown and one with Seedling oranges, a total of more than 600 oranges under each condition.

fruit must spend several days en route or on display, the small retailer and the consumer often take heavy losses, and these losses bring discredit not only to the particular shipment but to all shipments that seem to have a common origin.

Temperature is well known to be extremely important. If the fruit is kept cool during transit, and the weather is cool upon arrival, there is little probability of loss before it reaches the consumer; a few warm days may change the whole picture, especially if there is an over-supplied market or any delay in distribution. Fruit that is offered for sale is usually held at outside temperature and with present shipping regulations there is likely to be little chance to benefit from delayed unloading of refrigerated cars.

A great deal has been accomplished in decay prevention in recent years by increased speed all along the line; in the packing house,

the smaller markets. It will be surprising if there is not a resulting increase in the reports of loss from stem end rot.

Even with distribution as it has been in the past, the small retailer has had his losses. Last summer I spent a few weeks in a New Eng-

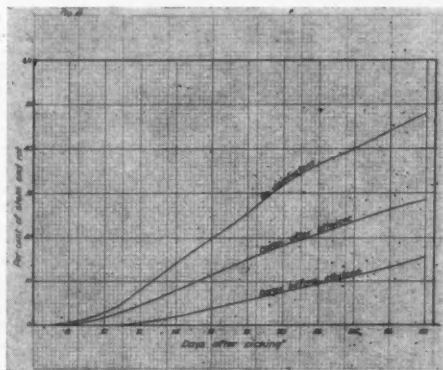


Fig. 2. Stem end rot of oranges as affected by borax treatments before and after ethylene. The curves give the average of five separate experiments, two with Valencias in the spring of 1941, and three with Parson Browns in the fall of 1941. The ethylene treatments were for 42 hours. The borax was applied as an 8 per cent solution at 100° F. for two minutes, and the fruit washed two days later.

The oranges used in these experiments were purchased with funds supplied by the Florida Citrus Commission.

MANPOWER needs Food Power to win the fight!

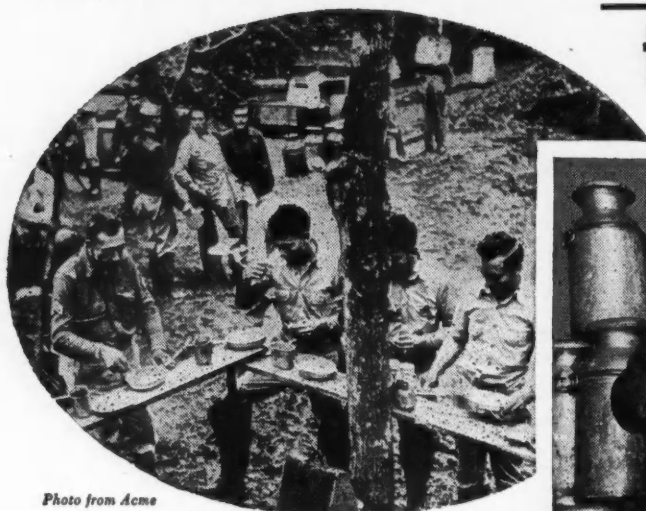


Photo from Acme

TIME OUT FOR FOOD! American soldiers are the world's best fed fighters. East, west, north, south, our boys are counting on us to keep the food coming, to keep its quality high. We've got to win. That means we've got to produce as never before.



Photos from U. S. Dept. of Agriculture, by Forsythe



MILK AND EGGS — They're food power to put the punch in our fighters, our war workers, our civilians, and our allies. They are basic food and food is one of the major materials of wars. Food is what makes man-power effective. Eggs and milk are absolutely vital to our great nutrition program. Keep 'em coming. Food for Freedom!

13 IS BAD LUCK! Yeah, bad luck for Hitler. Thirteen pigs in one litter do a little home work in nutrition. Meat is a war weapon so important that demand is far greater than supply, despite the greatest production in history. Come on, pigs, cows, chickens!

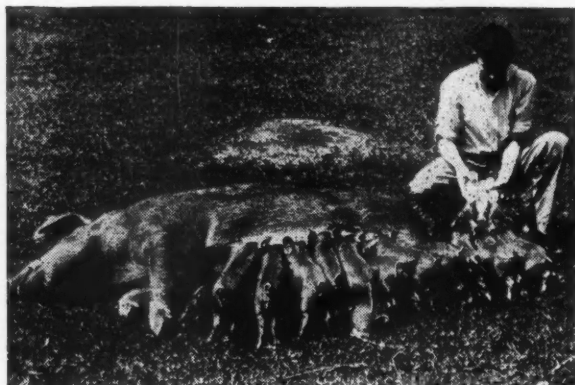


Photo from Acme

This is one of a series of reports from the United States Department of Agriculture published by the Chilean Nitrate Educational Bureau, Inc., in furtherance of the Nation's food production program. Publication of this report in this space does not constitute endorsement by the United States Department of Agriculture of any commercial product.

THE NITROGEN SITUATION

War needs will have first call on our nitrate supply in 1943. But, if the present outlook continues, U. S. farmers will have, in the form of mixed fertilizers and for direct application, at least four-fifths the chemical nitrate they had for fertilizer in 1942. In general, this will be enough to meet our essential agricultural needs.

But we shall need to make the most efficient use of our available chemical nitrogen supply for farm uses. The Department of Agriculture, in co-operation with the War Production Board and the Office of Price Administration, has agreed on a program designed to do this. The

number of grades of fertilizers has been reduced to conserve the supply. Crops most essential to the war will have first call on fertilizer nitrogen; this will include such uses as top-dressing grain in South-eastern areas where absolutely essential. Chemical nitrogen may not be used on lawns, golf courses and for other "luxury" uses. It should not be used on

non-essential crops, or even on some essential crops of which we have a very large surplus.

The byword on use of chemical nitrogen in 1943 will be to use it wisely to get the highest possible return in essential food and fiber crops.



Food for Freedom... the Spirit of 1943

BUY WAR BONDS AND STAMPS



Publication office at Bartow, Florida. Entered as second class matter February 16th, 1920, at the post office at Tampa, Florida, under the act of March 3, 1879. Entered as second class matter June 19, 1933, at the post office at Bartow, Florida, under act of March 3, 1879.

Every Acre Of LandMust Work

"Total war requires that we put every acre of land to the use for which it is best adapted," said Dr. T. S. Buie, regional conservator, Soil Conservation Service, Spartanburg, S. C., in addressing the 18th annual Southern convention of the National Fertilizer association in Atlanta. "The demand for the increased production of livestock products, as well as the shortage of labor, makes it necessary that we devote more of the farm acreage to improved pasture and hay crops which have relatively low labor requirements and provide vitally needed products. Fortunately the ground-work has been laid for the sound development of such a program on an extensive scale here in the Southeast."

Dr. Buie pointed out that the Soil Conservation Service began its work in 1933 on a demonstration basis, but that since 1937 laws have been passed in most states authorizing the organization of Soil Conservation Districts with which the federal government cooperates by furnishing assistance and that the Soil Conservation Service is now cooperating with 159 such districts which farmers themselves have organized in the Southeastern region. Dr. Buie stated that up to June 30, 1942, the Service had assisted more than 42,000 farmers in developing conservation programs on approximately 7,000,000 acres of land.

"One of the most striking features

OUR BIRTHDAY

The Citrus Industry is 23 years old this month.

Many things have happened in Florida and among the growers of Florida since The Citrus Industry first saw the light of day . . . which today we are not going to review, simply because we want to say that the warm friendships, the firm loyalties, and the great industry we are privileged to serve, have brought during these 23 years a sense of great satisfaction . . . which has made the effort very much worth while.

about the land conversion made on these farms," Dr. Buie said, "is that approximately 440,000 acres of formerly idle land have been reemployed and put to productive use as a result of conservation plans. Approximately 120,000 acres of the waste land are being brought back into cultivation and protected against erosion through the use of terraces, contour tillage, systematic rotations, including summer and winter cover crops, and other conservation measures. Nearly 124,000 acres are being converted to perennial hay, 96,000 acres

are being developed for permanent pasture, 80,000 acres are being converted to woodland, 12,000 acres to wildlife, and the remainder to various miscellaneous uses. Thus 340,000 acres, or more than 77 per cent, of this idle land has been brought back into cultivation or is being developed for pasture or hay crops that will make an immediate contribution to the economy of the farm. Of the more than 155,000,000 acres in farms in the Southeastern region, nearly 10,000,000 acres are idle.

"Here in the Southeast the population pressure on the land is intense, and when we consider that we have only 5.7 acres of cropland per farm person, it is obvious that we cannot at any time afford to allow 10.5 acres of land per farm to remain idle. Every acre must be devoted to the use for which it is best adapted, must be protected against erosion, and made to produce the maximum yields of which it is capable."

Dr. Buie illustrated what is being accomplished by reference to a recent survey among 1,800 cooperating farmers. "On the 284 farms included in the survey in Alabama," he said, "cotton acreage has been reduced 23 per cent but the yield per acre has increased 31 per cent. And these 384 farmers have increased their total cotton yield by 40,000 pounds on 23 per cent fewer acres than they had in cotton before conservation plans

(Continued on Page 16)

PREVENTION OF STEM END ROT 1)

(Continued from page 3)

47% of decay by the end of the week. The consumer is not in a position to put up a fight because he loses one orange out of a dozen, but if this loss is repeated, he undoubtedly does not forget when he is making later purchases. As a

but it is doubtful if the importance of care is fully appreciated. Excesses in temperature, humidity, and length of treatment all increase stem end rot and shorten the life of the fruit.

Even the best of ethylene treatments has an unfavorable effect. Figure 1 gives a comparison of the stem end rot that developed on ethylene treated and on non-treated

ethylene treated fruit as compared with 2½% in the untreated fruit, and at the end of three weeks, 51% in the treated, and 13% in the untreated. Cultures from the decayed fruit showed that the increased decay resulting from ethylene was due almost entirely to the fungus *Diplodia* and not to *Phomopsis*. The *Phomopsis* decay was approximately the same on the treat-

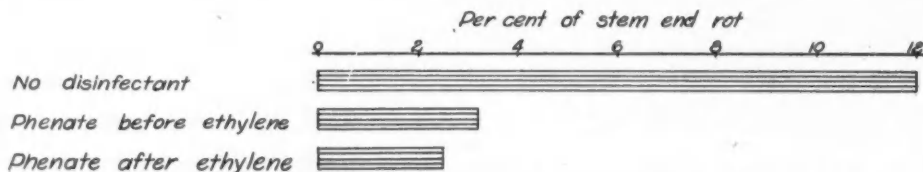


Fig. 3. Stem end rot of oranges as affected by sodium-ortho-phenylphenate treatments before and after ethylene. The bars show the average stem end rot development at the end of two weeks at 70° for seven separate tests, three with Parson Browns, two with Valencias, and two with Jaffas. The phenate was applied as a 1.2 per cent solution at 100° F. for two minutes and was followed immediately by washing. All lots had been in the ethylene room for 42 hours.

northern consumer and student of market troubles, I feel certain that there is no other single factor that has as great tendency as stem end rot to build up consumer sales resistance on Florida oranges.

Ethylene Treatments

Ethylene treatments seem to be an indispensable evil. Oranges must have a proper color to make a market appeal, but it is well known that ethylene treatments tend to increase stem end rot. Much of this is due to careless operation and excessive treatment. The importance of temperature, humidity, and ventilation has been fully established, and bulletins are available giving detailed instructions for proper operation,

oranges in experiments at Orlando in the fall and early winter of 1941-42. The results are the average of six separate experiments, five with Parson Brown and one with seedling oranges, with a total of more than 600 oranges under each condition. The ethylene treatments were for 42 hours. The ethylene was applied by the trickle method. The temperature was maintained at approximately 82°F., the relative humidity at 87 to 92%, and there was continuous ventilation. Both treated and untreated lots were stored in a basement at a temperature of approximately 70° F.

At the end of two weeks there was 27% of stem end rot in the

ed and untreated fruit, whereas, the *Diplodia* decay at the end of three weeks stood at 3% for the untreated fruit, and 39% for the treated fruit. The great speeding up of *Diplodia* under ethylene treating conditions is due partly to the high temperature and partly to the weakening of the buttons. Under some conditions the ethylene itself stimulates *Diplodia*, and under certain conditions favorable to both fungi it is known that *Diplodia* can produce decay in half the time of *Phomopsis*.

From the economic standpoint the important thing is the amount of decay and a method of preventing it. Several methods of prevention or

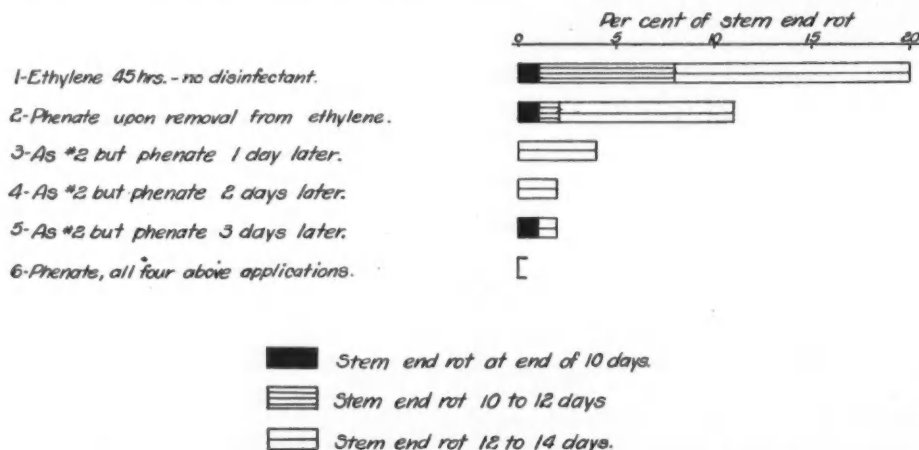


Fig. 4. Stem end rot of Parson Brown oranges as affected by sodium-ortho-phenylphenate treatments immediately after removal from ethylene; by treatments one, two, and three days later; and by a succession of these treatments. The phenate was applied as a 1.2 per cent solution at 100° F. for two minutes followed immediately by washing. All lots had been in the ethylene room 42 hours.

reduction are available, among which are refrigeration, the shortening or elimination of the ethylene treatment as far as practicable, and the use of disinfectants.

Refrigeration

Since neither *Phomopsis* nor *Diplodia* will cause damage of commercial importance at temperatures below 40°, loss from stem end rot can be avoided or greatly reduced

Shortening or Avoidance of Ethylene Treatments

If the purpose of the shipper is, as it should be, to maintain consumer demand, it is questionable whether the use of the ethylene treatment merely to heighten color is worthwhile. A deep orange color appeals to the eye and may lead to a first sale; but if, along with it, come losses from decay, these will

had enough green color to need ethylene treatment. A great favor would be done to the consumer and retailer if such fruit, in so far as may be practicable, could be run over the belt, the green-end oranges thrown out for ethylene treatment, and the others hastened on their way to storage or the market. There is no more satisfactory method of preventing stem end rot than keeping

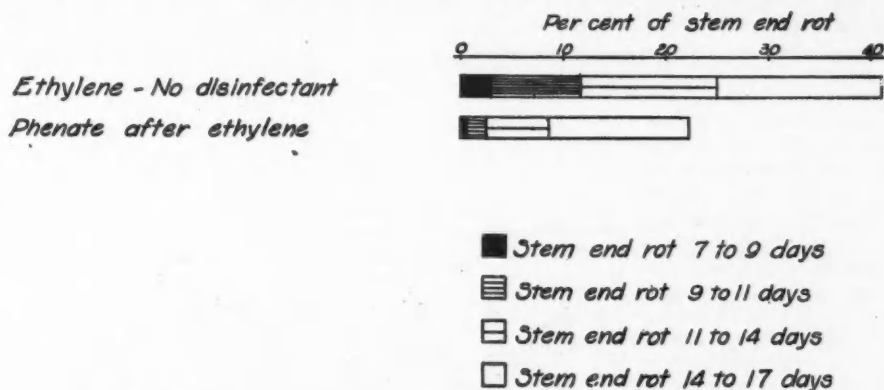


Fig. 5. Stem end rot of oranges as affected by treatments with sodium-ortho-phenyl-phenate. The treatments were with 1.2 per cent solution at 100° F. for two minutes, followed by washing. The bars show the average of nine separate experiments; one with Valencias, one with Hamlins, five with Parson Browns, one with Seedlings, and one with Jaffas. All lots were in an ethylene room 42 hours prior to disinfecting.

by prompt precooling of the fruit to 40° or lower and shipment under refrigeration. However, the fast freight schedules now in effect ordinarily insure delivery of shipments at northern markets before non-pre-cooled consignments can be reduced to a temperature that would arrest stem end rot through refrigeration in transit, and since many shippers (if not most of them) are not equipped with precooling facilities, they must generally rely on other methods of control.

not be soon forgotten. In the long run, it is certainly unfortunate to put oranges through the ethylene treatment if they really do not need it. This is especially true if there is any possibility of the fruit's running into warm weather on the market.

In many cases only a small percentage of the oranges in a given lot need the ethylene treatment. In the experiments reported above, there was an average of not more than 5 or 6 per cent of the fruit that

the buttons and the whole orange in as fresh and active a condition as possible, and even the best of ethylene treatments weakens the fruit to some extent.

Disinfectants

Long lists of disinfectants have been tested as preventives of stem end rot, but nearly all of them have either failed to give control or have caused injury to the fruit. Out of the long series only two seem to deserve practical consideration at

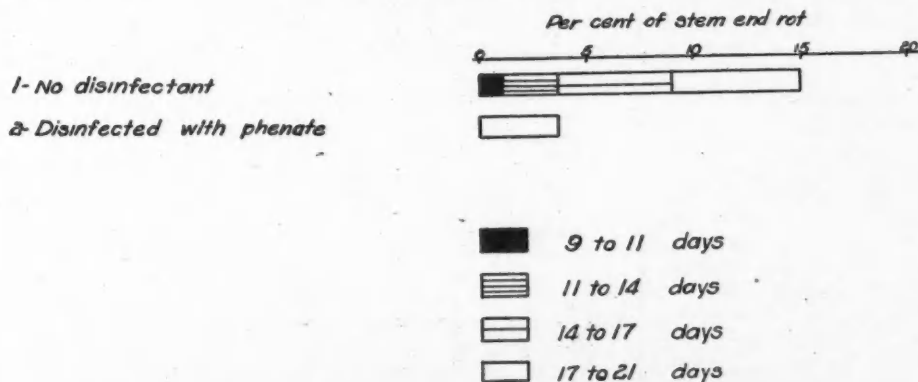


Fig. 6. Stem end rot of oranges as affected by treatments with sodium-ortho-phenyl-phenate. The treatments were with 1.2 per cent solution at 100° F. for two minutes followed by washing. The bars show the average of three separate experiments, one each with Parson Browns, Seedlings and Jaffas. None of the lots was treated with ethylene, but all of the disinfecting was done two days after harvesting.

this time, borax and sodium-ortho-phenyl-phenate.

Borax

Borax has been widely tested under various grove and packing house conditions, and its merit as a stem end rot preventive has been well established by Winston and others. For satisfactory results it must be left on the fruit for considerable time, and under the usual packing house conditions this means that it should be applied before the ethylene treatment and be left on during the treatment. If the fruit is not to be gassed, leaving borax on the fruit overnight gives fairly good results. A comparison of results obtained with borax treatments before and after ethylene is shown in figure 2. The curves show the average from five separate tests, two with Valencias in the spring of 1941, and three with Parson Browns in the fall of 1941. At the end of two weeks' holding at 70°, the fruit receiving ethylene but no disinfectant had 14½% of stem end rot, that receiving borax after ethylene 7%, and that receiving borax before ethylene 2%. At the end of three weeks these percentages stood at 34, 19.5 and 8.5, respectively. The treatment after ethylene gave less than half the control of the treatment before ethylene. In these experiments the borax applied after ethylene was left on the fruit two days to match the pre-ethylene treatment, and then was washed off, a thing that would be entirely impractical under packing house conditions.

Winston has published experimental data showing the importance of borax treatment immediately after harvesting the fruit. It is the most effective method known of offsetting the stem end rot tendencies likely to be developed in the ethylene room, but under the usual packing house conditions it means an extra step in the operations, and it has never met with popular favor.

Sodium-Ortho-Phenyl-Phenate

A year ago we reported to this organization that with laboratory inoculated fruit sodium-ortho-phenyl-phenate had shown considerable promise in the control of stem end rot. During the past year many tests have been made with naturally infected Florida oranges. The results have not been as uniformly favorable as with artificially inoculated fruit, yet under most conditions there has been a considerable measure of success.

With the artificially inoculated fruit the best results were obtained by giving a two-minute exposure to the disinfectant followed by im-

mediate washing to prevent harmful effects upon the peel. This method works quite well when all the spores are in the same state of activity, but apparently under grove conditions there is considerable variation in the stage of development or the activity of the stem end rot fungi, and it is not always easy to reach effectively all of the organisms with a single two-minute treatment. However, the treatment has the advantage that it fits in well with the usual packing house operations and is as effective after ethylene treatment as before.

A comparison between the results obtained by disinfecting with sodium-ortho-phenyl-phenate before ethy-

lene treatment and disinfecting after the treatment is shown in figure 3. The results are the average of three tests with Parson Brown, two with Valencias, and two with Jaffas. At the end of two weeks in 70° storage, the untreated fruit had 12.0% of stem end rot, that disinfected with phenate before ethylene 3.2%, and that disinfected after ethylene 2.5%. The disinfecting treatments after ethylene were fully as effective as those before.

(Continued next month)

BUY UNITED STATES WAR
BONDS AND STAMPS

NACO Serves!

WITHIN the limits permitted by our Government as to our staff, NACO will continue to contact growers and render valuable and unselfish advice to Florida's Citrus and Vegetable Growers in matters of cultural practices, fertilizer requirements and insect and disease control.



NACO manufactures in its new and modern plant in Florida a most adequate group of insecticidal and fungicidal Dusts for all Florida Truck and Citrus needs. The NACO Dust program is sufficiently elastic to fit any individual grower's needs.

Almost without exception all the analyses or grades of fertilizer now permitted to be offered under present government regulations, fit into the NACO program — and within reasonable limits we will be able to supply our customers with the same fine quality of mixed fertilizers as we have in the past.

NACO FERTILIZER COMPANY JACKSONVILLE FLORIDA

Research To Revolutionize Agricultural Production

A postwar world in which such advances as overnight airplane transportation of ripe perishable farm products, freshly picked thousands of miles away the day before, will be commonplace, was pictured by Dr. W. H. Tisdale of the Du Pont Company here on Oct. 28.

Speaking before the annual meeting of the Association of Land Grant Colleges and Universities, Dr. Tisdale, plant pathologist and director of Du Pont's Pest Control Research Laboratory at Wilmington, Delaware, indicated that agricultural research and the farm population will contribute largely to this new scheme of things, and at the same time, share in its welcome benefits.

"Natural resources are available in sufficient quantities for all to live in comfort in normal times" he said. "Certainly if anyone is entitled to the comforts and conveniences of a modern home it is the farmer and his family who have known no time-clock except the early morning alarm."

Dr. Tisdale predicted that with the coming of peace we will see rapid expansion of rural electrification and mechanization, which make possible many other conveniences. He said the farmer would probably have his own refrigeration plant to replace, at least in part, the smokehouse and the canning outfit.

The speaker made a plea for research, saying that if the ideals set forth in the Atlantic Charter are to prevail after the war, research in all its phases, and especially in its international phases, must and will surpass anything yet known. "Agricultural research," he said, "will take its place near the top in the new scheme of things."

Research already under way may enable us to grow at least a part of the rubber, and also rotenone and pyrethrum for insecticides, needed to meet our requirements. Many million of acres of worn-out and waste land will be converted into profitable forests and pastures."

Dr. Tisdale said the practical solutions of many agricultural problems depend on the discoveries of applied research in other sciences

such as chemistry, physics, engineering, and mathematics, and especially research in the industries.

He said the highest tribute we can now pay the American farmer and our agricultural research institutions in these critical times is to point to the unprecedented crop yields of 1942. He mentioned briefly numerous discoveries of recent 'research' which undoubtedly helped farmers to attain and surpass the unusually large quotas set for them shortly after Pearl Harbor.

Dwelling on development of new strains and varieties of crops representing better quality, high yields, and resistance to disease, insects, drought, and frost, he told of work under way to breed strains of cotton adapted to the mechanical pick-

er. More than 90 per cent of the corn acreage in leading corn states, he said, is now planted to hybrid strains which yield 15 to 30 per cent more than the old varieties. He described a new waxy strain of corn developed for use as a substitute for imported tapioca.

The breeding of adaptable varieties of soybeans for high oil and protein contents, he declared, had laid the foundation for the tremendous increase in acreage, so timely and important in view of our needs for oils and food during the war. He told of the breeding of plants to resist the cure rather than the disease, giving as an example a sulfur-resistant strain of cantaloupe to which sulfur can be applied to control mildew without injury to

(Continued on page 12)

★ GROW for VICTORY in '43

To all users of GULF BRANDS of Friendly Fertilizers, we pledge fullest cooperation in meeting the high goals for 1943 which Florida growers have been asked to produce to help win the war. To other growers who have offered a large volume of new business we express our sincere regrets that we cannot now serve them — but when the peace is written we will again welcome the opportunity to demonstrate that the GULF plan of the right plant foods in the right amounts at the right time is the way to grow better crops.

For Everything that Grows in Florida...use

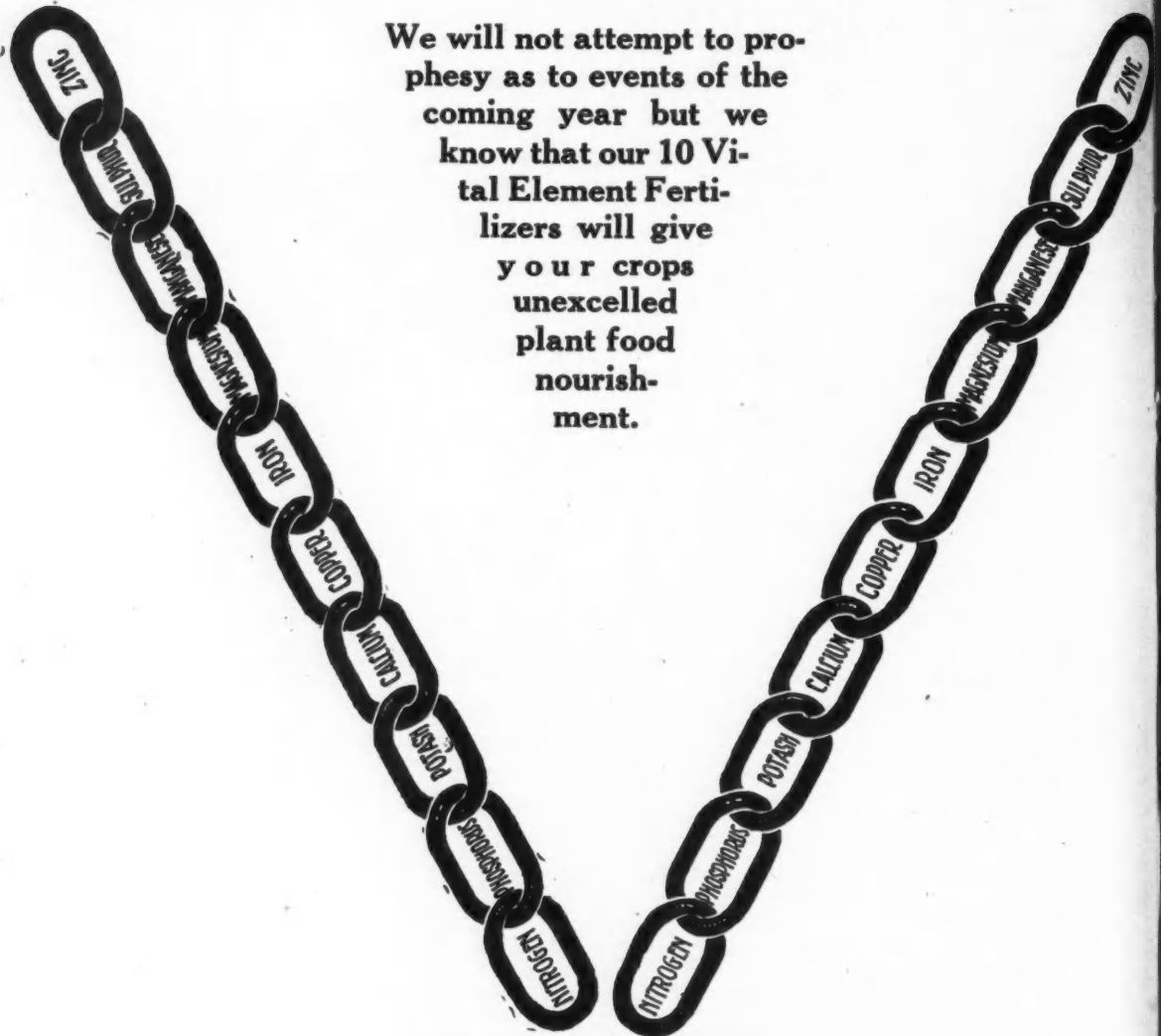
GULF Brands of **FERTILIZER**

The Gulf Fertilizer Company
Tampa and Port Everglades, Florida



Our Sincere Wishes For A Satisfying Go Out To Each Of The Many

We will not attempt to prophesy as to events of the coming year but we know that our 10 Vital Element Fertilizers will give your crops unexcelled plant food nourishment.



Superior Fertilizer

Phone Y-1623

G. D. Smith, President
Factory and Office East Broadway At 4th

FREE PUBLIC LIBRARY
JACKSONVILLE, FLORIDA

Satisfying New Year Patrons We Served Last Year

To our customers must go the credit for the remarkable record of sales which has characterized our company from the very beginning of its existence—a record which in the course of a very few years has placed us near the top of those companies serving the growers of this state, from the viewpoint of sales volume. Of course, we know these customers would not have purchased our Extra Value Brands of Fertilizers in such volume had they not proven outstandingly effective — yet we realize that the discrimination of our customers more than any sales efforts of our own is responsible for our constant growth of business.

We Are Grateful That We Have Been Able To Supply Our Customers Needs

SUPERIOR'S EXTRA VALUE FERTILIZERS

There has been much new business which we have been obliged to refuse this past season but we are grateful that we have in most instances been able to care for the requirements of our old customers. We shall exert every possible effort to continue to serve the needs of our customers — and it goes without saying that we are most grateful for the fine patronage which has been accorded us.

In the future, as in the past, you may count upon Extra Value Brands giving you the same satisfying results in providing the nourishment so necessary to the production of fine crops.

USE EXTRA VALUE BRANDS

—And Secure Maximum Efficiency With
Greatest Economy . . . —

SUPERIOR'S EXTRA VALUE INSECTICIDES

Our Extra Value Spray Oil. A Better Oil
Emulsion Containing 83% Oil . . . —

And Our Superior 99-1 Oil. A Better Tank
Mix Oil. Contains 99% Oil . . . —

Extra Value Neu-Cop 50% Copper — Far
better than most neutral coppers . . . —

Extra Value Wettable Sulphur, 97% Sul-
phur . . . —

Zinc-Co Wettable Sulphur, 80% Sulphur,
1.75% Zinc, 3.75% Copper . . . —

Z-S Wettable Sulphur, 93% Sulphur,
1.75% Zinc . . . —

SPRAY THE SUPERIOR WAY

—And Secure Maximum Efficiency With
Greatest Economy . . . —

tizer Company

San, Pres.,
At 47th Street, Tampa, Florida

P. O. Box 1021

Sale of Citrus Fruit Drinks Is Increasing

Many people are ordering citrus drinks when they cannot get their favorite carbonated beverage, the Florida Citrus Commission said in reporting that soda fountains within the state are cooperating in its effort to promote Florida fruit juices.

Commission officials state frankly that they are trying to take the fullest advantage of the increasing shortage of some soft drinks. "We hope in this way to substantially increase the consumption of both fresh and canned Florida orange and grapefruit juices," said Don A. Butts, advertising supervisor.

"The biggest beneficiary of the soft drink shortage at Florida soda fountains appears to be the limeade, which the Commission is also promoting," Butts reported. "This famous drink, which is always the favorite of many as a summer thirst-quencher, comes next with many others nowadays when they cannot get carbonated beverages."

Of 22 leading fountain outlets checked by the Commission this week in Lakeland, Tampa and Orlando, all were found to be serving both fresh orange juice and fresh limeades, and nine were serving fresh grapefruit juice. Canned grapefruit juice was offered by nine of the same stores, canned orange juice and blended juice by one each.

"Many Florida fountain operators are using fresh oranges and grapefruit that have been held in storage, but as the supply diminishes they are turning to canned citrus juices," Butts reported to the Commission's advertising committee. "Some drug organizations were found to observe the policy of serving only fresh fruit juices, in the producing area, as long as fresh fruit could be obtained."

The Commission's advertising committee had reports from its sales promotion representatives this week that concerns with soft drink concessions at northern baseball parks, unable to get all the bottled beverages they want, are beginning to sell canned grapefruit juice, and that some of the army camps in southeastern states are now taking limes in preference to lemons.

RESEARCH TO REVOLUTIONIZE AGRICULTURAL PRODUCTION

(Continued from page 9)

the plant.

Dr. Tisdale said the interchange of fungous spores, some of which travel by wind as far as 1,000 miles in 48 hours, means resistant varieties must be developed for all affected regions. "It may eventually be found," he asserted, "that there is an interchange, between continents, of parasitic organisms, possibly both plant and animal parasites, including those attacking humans—another worry for our quarantine and health authorities."

The speaker predicted that the newly developed electron microscope and electron spectrometer might well help solve problems connected with causes of, and cures for, virus diseases in animals and plants—among the most baffling confronting science.

Dr. Tisdale noted the discovery of a chemical, colchicine, that doubles the number of chromosomes in plant cells, and that promises to speed up results and plant-breeding investigations. He discussed the recent discovery that promises to speed up results in synthetic urea can be used to replace in part nitrogenous plant material in feed for cattle and other ruminants. He told of the discovery of the functions of numerous trace elements such as boron, zinc, copper, manganese, and iodine, in the development and health of plants.

He told of the tremendous possibilities in plant hormones, including the prevention of preharvest drop of apples and pears. He discussed effects of light on growth and reproduction of plants, saying varieties of high quality can be bred that are adaptable to day-lengths of the regions where they are to be grown.

The Du Pont plant pathologist said products for the control of insects, worms, rodents, fungi, bacteria, and weeds should preferably be colorless, odorless, tasteless, inexpensive, non-poisonous to humans and highly effective on pests, and that thousands of new chemicals had been evaluated with encouraging results.

The speaker pointed out that steady progress had been made in harvesting and preparing agricultural products for distribution and consumption. Important advances include quick-freezing of both plant and animal products and improved

Fruit Juice Re- places Sugar In Canning

Fruit juice may pinch-hit for all or part of the sugar sirup in canning fruit. Canning specialists of the U. S. Department of Agriculture say that as far as spoilage is concerned, fruit will "keep" just as well if canned with no sugar but sugar does help preserve color, flavor, and texture. They suggest a 3-way sorting of fruit for canning. Select the riper, juicier, sweeter fruit to heat and strain the juice. Save the firmer fruits to use whole to fill the jar. Discard fruit that is overripe, has decayed spots, or is too green.

Heat the softer sweeter fruit just enough to loosen the juice, always using as low a temperature as possible. Strain the juice and heat to simmering — not boiling — temperature. Pour the juice over the whole raw fruits packed in the jars and process the jars in boiling water by the usual method. Berries in pint or quart glass jars require 20 minutes in the boiling water bath, but firmer fruits like peaches or apricots require 25 to 35 minutes.

Another way of putting up fruits without sugar is to precook the fruit and then pack hot in the jars. Fruit packed hot does not hold its shape so well but gives off more juice to fill the jars. Boil berries and other small juicy fruits 3 or 4 minutes and then pack hot in hot sterilized jars. Be sure all fruits and fruit pieces are covered with juice. Then process the jars 5 minutes in a boiling water bath.

Since sugar helps hold flavor, color and texture of canned fruit, use a little sugar sirup in the jar if possible and then fill the jar with juice. A few grains of salt in each jar also helps bring out the natural sweetness and flavor of the fruit.

methods of dehydration of food materials to retain their food value and normal flavor—major items in supplying food for war purposes.

BUY UNITED STATES WAR
BONDS AND STAMPS

THE SPIRIT OF '43 MAKE EVERY ACRE DO ITS BEST



The call for citrus has probably never been so great as it will be in 1943. Our armed forces here and abroad, our own workers and our Allies all need the healthful products of Florida's groves . . . It has always been good business to **MAKE EVERY ACRE DO ITS BEST** — even to make every tree do its best. Now it's more than good business — it's a patriotic responsibility. Use Armour's **BIG CROP** to help you do your part to help produce the citrus yields the world needs.

ARMOUR FERTILIZER WORKS

Jacksonville, Florida

The LYONIZER

Department

COMPILED BY THE LYONS FERTILIZER CO.

Manatee County...

Manatee County with an area of 500,000 acres and with 25,000 acres under cultivation ships annually around 5000 cars of fresh fruits and vegetables to the Market.

Serving this rich agricultural county as advisor to the growers is the very capable County Agricultural Agent Mr. Ed. L. Ayres. This man is one of the best posted Agriculturists in the state and is doing a splendid job of promoting the agricultural interests of Manatee County.

The annual value of farm products shipped from Manatee County for the past twenty-five years has placed her near the top of the list of important ranking agricultural counties in the United States. The large proportion and variety of products which this county contributes to the winter food baskets of the country has become so well established that this area has become well known in all of the important market centers and this has turned the eyes of many prospective settlers to the West Coast of Florida and to Manatee County in particular.

One of the reasons why Manatee County has gained such widespread recognition is the fact that a large variety of products are grown and shipped on a commercial scale. While many counties are noted for the production of one or two well established crops, Manatee County ships in car lots more than twenty commodities annually. This is made possible by the mild winter temperature and by the wide variety of excellent soils.

The warm waters of the Gulf of Mexico to the west and of Tampa Bay to the north gives excellent winter production to tender crops. At this season of the year fresh fruits and vegetables rich in minerals and vitamins find their welcome way to the tables of the American public. Shipments start in October and continue through June. Some of the most important of these commodities

Reports of Lyons Field Men . . .

HILLSBOROUGH AND PINELLAS COUNTIES C. S. (Charlie) Little

It is really a pleasure to report that we have had sufficient rain in this territory to take care of the severe drought, and now our trees are just about to return to normalcy. We lost a considerable tonnage of grapefruit as a result of the drought, but prices have been good and it now appears that most growers in the territory will have a successful financial year. We are having some trouble with valencias splitting.

POLK & HIGHLAND COUNTIES J. M. (Jim) Sample

The early December rains, while not plentiful, have restored the soil moisture and trees again are looking well. Some groves on thirsty soils lost a good deal of foliage and fruit, due the drought, and in some cases the damage was serious enough to kill twigs and limbs. These groves may or may not bloom and set next year's crop, depending on the extent of root mortality on these trees. Following the rains the fall application of fertilizer was applied where it was delayed due to the drought. Most growers are determined to build back their trees as strongly as possible for another crop.

shipped are grapefruit, oranges, tomatoes, celery, lettuce, peppers, cabbage, escarloe cucumbers, eggplants, strawberries, sweet and irish potatoes.

During the present period of War Emergency, Manatee County has greatly increased the production of her crops which have been designated as essential food crops and discontinued the acreage of non essential crops. The growers and residents that remain in the county are fully determined that they will do their part to win the war with food while their sons are fighting on the battle fronts of the world.

The cattle industry is being rapidly developed in Manatee County. Poultry is an important industry with one of the largest poultry plants in the state being located near Bradenton. Commercial fishing ranks around the top in counties bordering the Gulf.

SOUTHWEST FLORIDA F. W. (Felton) Scott

Vegetable growers in this section are winding up the fall season and while we experienced much adverse weather and had to continually combat plant diseases, we have enjoyed the best market on all produce that this section has experienced in a number of years. Growers are now preparing for their spring crops and indications are that we will have a normal planting despite the uncertainty of the labor situation. Growers are switching to the essential crops and reducing the acreage on the non essential crops like cucumbers. Oranges are being moved rapidly and the market has been good all season.

NORTH CENTRAL FLORIDA V. E. (Val) Bourland

Many groves in this territory were beginning to look ragged as a result of the drought during October and November but when we started getting some rain during the early part of December there was an immediate response by the trees and they are now looking good again with few exceptions, where the drought had become so severe that the trees were defoliated.

WEST CENTRAL FLORIDA E. A. (Mac) McCartney

Fruit is being moved to market from this territory just as fast as it can be picked and processed. The prices are good and growers are anticipating a good market for the remainder of the season. The rains have been extremely beneficial to both citrus and vegetable crops. Berries are beginning to move to the market from the Plant City section. Vegetable crops throughout this territory have shown a marked improvement during the past three weeks.

We Are Doing Everything Possible To Cooperate In The Nation's Effort To Conserve Gasoline And Rubber And Consequently We Might Not Get To See You As Often As We Would Like, But In Case We Are Not There At Regular Intervals, Remember That A Card Will Bring Our Service To You.

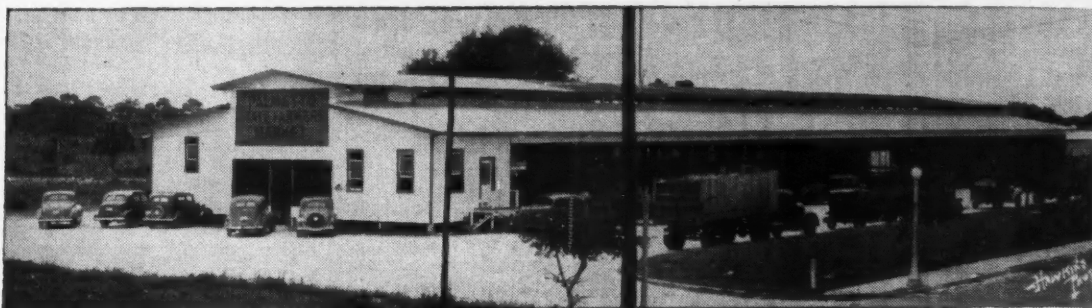
MANATEE COUNTY -- Showing various scenes of productive enterprise in this great horticultural county.



Mr. Ed. L. Ayres, County Agent for Manatee County is shown in a celery field. Mr. Ayres is one of the most capable Agents in the state and is highly regarded by all the growers of his county. You have seen his displays of the agricultural diversity of Manatee county at the Florida State Fair in Tampa.

Shown below is a very nice crop of iceberg lettuce in Manatee county.

Shown below is the Farmers State Market at Palmetto. This market handled 144,541 bushels of produce in the spring of 1942 with a value of \$297,610.68. In the fall 48,277 bushels of produce was handled with a return of \$147,468.99 to the growers. These figures do not include produce shipped by anyone of the several independent packing houses.



Erroneous Report On Citrus Ceiling Prices

Published reports of anticipated ceiling prices on Florida citrus fruits are unauthorized and incorrect, Marvin H. Walker, secretary-manager of the Florida Citrus Commission, declared recently.

"The ceiling prices will be on the basis of f. o. b. sales of packed or canned fruit, at packing houses or canning plants, and will not be on the basis of tree prices received by growers," he said.

"The figures published as ceiling tree prices of fresh and processed Florida fruits are, in the case of oranges, the comparable prices of this fruit and, in the case of grapefruit, the adjusted 'highest tree prices' received between July 1 and September 15, 1942.

"The law requires that any ceiling prices must reflect these returns to growers. Under the price ceiling program, returns to growers can be substantially higher than these base tree prices. The ultimate tree prices will be higher than these figures when adjustments are made for grade and size differentials, varieties, seasons and districts."

Walker said that the comparable prices of Florida oranges are \$1.65 per box on the tree for fresh fruit and \$1.44 for processed fruit, and that the "highest price received by producer" figures for Florida grapefruit, as calculated by the Department of Agriculture, are \$1.04 for fresh fruit and 74 cents for processed fruit.

The "highest price received by producer" figures will be used for grapefruit instead of the comparable prices for grapefruit, he explained, because they are higher than the comparable prices and because the law says that ceiling prices must reflect returns to growers which are as high as the highest of the two sets of figures.

Walker said the permanent price ceiling order for citrus fruits, replacing the temporary order which expires today, will probably be announced the latter part of this week to become effective about Dec. 10. He said the Office of Price Administration has promised five days' notice of the new order, to allow shippers, canners, jobbers and retailers to make any adjustments found necessary.

"This assurance of five days'

notice should dispel any fears of fruit buyers that they will be 'squeezed' by the new order," he said. "I do not believe that the ceiling prices on f. o. b. sales will affect present market prices of either fresh or processed Florida fruit," he said.

EVERY ACRE OF LAND MUST WORK

(Continued from Page 5)

were made. Likewise, the total corn acreage on these farms was reduced by 18 per cent but the corn yield was increased from 17.9 to 25.3 bushels per acre, an increase for the 284 farms of more than 41,000 bushels of corn at 18 per cent less land. In other words, these farmers have increased their total yields of both cotton and corn but at the same time have reduced the acreage of these crops by 17 acres per farm, and these acres are now available for development of pasture or the production of hay or other crops. They have more than doubled the acreage of improved pasture, have increased their yield of annual hay crops by more than 40 per cent, and of perennial hay by more than 500 per cent. The result is that on these farms the number of cattle has increased by 73 per cent, the number of hogs by 70 per cent, and of poultry by 53 per cent; and these increases are contributing directly to the supplies of vital food products needed in the successful prosecution of the war.

"The day is past when farmers in the South can be expected to devote their attention almost exclusively to the production of cotton and other row crops on an ever-shrinking acreage of good land. With only 5.7 acres of cropland per capita of farm population with which to feed ourselves and make our contribution to the welfare of the remainder of the world, we must put every acre of land on every farm to productive use and keep the land producing at its maximum capacity, not only this year but for many years to come. I have always felt that the fertilizer industry and the Soil Conservation Service have much in common. The goal towards which all of us are working is more efficient use of existing soil resources. This means more abundant production to meet the vital needs of this critical war period and the

tremendous job of reconstruction that will come after Victory has been won. It will also mean the attainment of that permanent type of agriculture which we all know it the rightful heritage of this region."

THE CITRUS INDUSTRY with which is merged The Citrus Leaf

Publication Office:
550 N. Broadway, Bartow, Florida
Published Monthly by
Associated Publications Corporation
Subscription, \$1.00 per year
in advance

— Entered as Second-Class Matter at
Bartow, Florida

For better control of melanose and scab

YELLOW CUPROCIDE spray can help you control melanose and scab—correct copper deficiency in your citrus groves.

Its safety has been proved by years of experimental work followed by extensive commercial use. *Yellow CUPROCIDE* is a complete fungicide. You need no lime, spreader or sticker. Extremely fine copper particles give you better coverage. Containing few inerts and used in low dosage— $\frac{3}{4}$ pound makes 100 gallons of spray—*Yellow CUPROCIDE* aids in keeping scale build-up to a minimum.

Ask your supplier for *Yellow CUPROCIDE*. Enjoy better control of melanose and scab.

Yellow CUPROCIDE

Distributed by
NACO FERTILIZER COMPANY

Yellow CUPROCIDE is made by*

**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE
PHILADELPHIA, PA.



*Trade mark, Reg. U. S. Pat. Off.

Pressure Canner A "Trust"

There will be relatively few new pressure canners on the market this summer owing to the shortage of materials. The number of models will be reduced, possibly to two — a smaller size for individual families, and a large one for families working together in community centers.

Non-acid vegetables, meats, and poultry must be processed in pressure cookers, says the U. S. Department of Agriculture.

Many of those who already own pressure canners are cleaning them up and putting them in good working order; having the pressure gauge and other important parts tested. Many are arranging to can on a "share-equipment" basis with neighbors. New pressure cookers are so scarce, the Department says, they may almost be regarded as a "trust from the Nation" to serve as many families or community centers as possible in saving garden products.

Florida To Observe Farm Mobilization Day on January 12

January 12, 1943 has been proclaimed Farm Mobilization Day by President Roosevelt, to center attention on the 1943 Food for Freedom goals recently announced by Secretary of Agriculture Wickard. The President has asked that on that day farmers throughout the land gather with agricultural representatives to discuss ways and means of securing maximum production of vital foods.

A Florida Farm Mobilization Day committee of 25 representatives of cooperative, civic, business and government groups interested in the state's agriculture has been appointed H. G. Clayton, chairman of the Florida USDA War Board. Governor Holland will be asked to proclaim the day for Florida. Arrangements for county celebrations and meetings are being made by county

GOOD LUCK IN 1943

Is our sincere wish for all Florida growers. May a kindly Providence grant you good growing weather, and an abundant harvest.

LUCK has nothing to do with the selection of your fertilizers. The experience of others in the use of

X-CEL Fertilizers

has demonstrated beyond all doubt the efficiency of these fine plant-foods. They are produced in Florida by Florida people for Florida growers.

Tennessee Basic Slag

is used exclusively by many of Florida's most successful growers. It is rich in vital minor elements greatly needed in most Florida soils. It will aid in the production of most Florida crops.

Let Us Help--

Our staff of Field Service Men know the answers to most of the problems facing the grower. They can frequently be of assistance. Call on them freely.

Jackson Grain Company

Our 34th Year
Tampa Florida

Valuable premium coupons are packed in every bag of X-CEL products

USDA war boards, of which the county agents are secretaries.

"I should like Farm Mobilization Day to be a symbol of a free America; a symbol of the might and productivity of our Nation; and a symbol of our unalterable determination to put to full use our agricultural resources as well as our other resources, in the achievement of complete victory," said President Roosevelt in his proclamation.

BUY UNITED STATES WAR BONDS AND STAMPS

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933, OF THE CITRUS INDUSTRY, PUBLISHED MONTHLY AT BARTOW, FLORIDA, FOR OCTOBER, 1942.

COUNTY OF POLK,
STATE OF FLORIDA,

Before me, notary public in and for the State and county aforesaid, personally appeared S. Lloyd Frisbie, who having been duly sworn according to law, deposes and says that he is the Business Manager of The Citrus Industry, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management, (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March, 1933, embodied in Section 537, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher — Associated Publications Corp., Bartow, Fla.

Editor — S. L. Frisbie, Tampa, Fla.
Business Manager — S. Lloyd Frisbie, Bartow, Fla.

2. That the owners are:
Associated Publications Corporation, Bartow, Florida.

S. L. Frisbie, Tampa, Fla.
S. Lloyd Frisbie, Bartow, Fla.
Loyal Frisbie, Bartow, Fla.
B. L. Gable, New York, N. Y.
F. L. Skelly, Orlando, Fla.
B. W. Skinner, Dunedin, Fla.
F. P. Wall, Mansfield, Ohio.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

American Fire & Casualty Co., Orlando, Fla.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and that affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

S. LLOYD FRISBIE,
Business Manager.

Sworn to and subscribed before me this 6th day of October, 1942.

(SEAL) H. M. STANFILL,
Notary Public.

(My commission expires 11-3-1942).

Food Deliveries To Allies Stress Concentrated Products

More than 552,000,000 pounds of foodstuffs and other farm commodities were delivered for shipment to the allied nations during September, the largest part consisting of concentrated foods and animal protein products, the Department of Agriculture announces. Total September deliveries were 40 percent larger than in the previous month.

Of the 6,344,000,000 pounds of foodstuffs delivered for shipment since the beginning of the Lend-Lease program in April, 1941, more than half consisted of dairy products and eggs, meat and fish, and fats and oils. During World War I, the bulk of food shipments were grains and cereals.

During the present war, by bunching deliveries of dried, concentrated, and animal protein products, it has been possible for the Russians, British, and other allies to get more food values into the limited shipping space available.

The concentrated foods and animal protein products in September deliveries, included 141,183,000 pounds of dried or other process dairy

products and eggs, 108,308,000 pounds of meat and fish, and 61,897,000 pounds of lards, fats and oils.

The Department's Agricultural Marketing Administration reports that since the start of the Lend-Lease program, about 16 percent of total deliveries for shipment to the allies has been dairy products. This compares with about 2 percent in World War I. About 24 percent of deliveries during the current war period has been pork products compared with 6 percent in the other war. So far Lend-Lease deliveries of grains and cereal products have been about 20 percent of the total. In World War I, 65 percent of all food shipments were grains and cereal products.

Citrus oil (lemon) 15,889 pounds; citrus pulp, 19,845,827 pounds; concentrated orange juice, 17,054,705 pounds (1,364,376 gallons); canned grapefruit, 5,399,970 pounds; 5,399,970 pounds; orange juice, 480,830 pounds; orange marmalade, 275,294 pounds.

PEACH TREES — Jewel variety propagated from selected bud wood in commercial successfully orchard-make reservation for January delivery. Robt. P. Thornton, c/o Clay Hill Nurseries Co., Box 2880, Tampa, Florida.

RUBY GRAPEFRUIT, Patented Red Blush Seedless, high quality prolific. Exclusive Licensed propagators of Florida. Also all standard varieties of citrus on Cleopatra and Sour. Lining out stock sour orange and sweet seedlings. Grand Island Nurseries, Eustis, Florida.

PLACE ORDER NOW Fall Delivery Citrus Trees. All Varieties. Paramount Grove Service, Box 843, Lakeland, Fla. 10-6t

LAKE GARFIELD NURSERIES COMPANY

BARTOW, FLORIDA

ALL STANDARD VARIETIES CITRUS TREES—SPECIAL PRICES NOW IN EFFECT

NICHOLSON'S EARLY ORANGE—

This outstanding orange of high juice content and rich and very delicious flavor during earliest maturity SHOULD and WILL bring high premiums. \$3.00 to \$7.00 per box can be realized if properly handled. Royal Purple Citrus Research Nursery, Orlando, Florida.

SUPERIOR CITRUS TREES. Best varieties. Specials are NEW varieties Tangelos and Temples. Plant grafted avocados NOW. Get prices. Ward's Nursery, Avon Park, Florida.

ALYCE CLOVER SEED. Ripe and cleaned. Ideal cover and hay crop. Write for information. P. E. Snyder, Box 866, Lakeland, Fla.

CLASSIFIED

Advertisements

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

CITRUS TREES—Best quality usual varieties on sour orange or rough lemon stock. Robt. P. Thornton, c/o Clay Hill Nurseries Co., Box 2880, Tampa, Florida.

CITRUS AND VEGETABLE PACKING HOUSE for sale with complete equipment at attractive price. Location Plant City, Florida. For details write Box No. 120, Bartow, Fla.